

What Is Claimed Is:

- 1 1. A system for performing a medical procedure, comprising:
2 a positioning system, said positioning system including:
3 an imaging device;
4 a video processor coupled to said imaging device;
5 a computer coupled to said video processor; and
6 a video display coupled to said computer; and
7 a resection device disposed within said positioning system.
- 1 2. The system of claim 1 wherein said imaging device includes a fluoroscope
2 and an x-ray imaging sensor.
- 1 3. The system of claim 2 wherein said resection device includes a distal tip
2 and wherein said distal tip is radiopaque.
- 1 4. The system of claim 1 wherein said computer defines tissue margins
2 around a lesion.
- 1 5. The system of claim 4 wherein said tissue margins are displayed on said
2 video display.
- 1 6. The system of claim 4 wherein said positioning system monitors a
2 position of said resection device.
- 1 7. The system of claim 6 wherein said computer is coupled to said resection
2 device and wherein said resection device is controlled by said computer based on said
3 tissue margins and said position of said resection device.
- 1 8. The system of claim 7 wherein said computer controls said resection
2 device by disabling said resection device if said resection device is positioned outside of
3 said tissue margins.

1 10. The system of claim 9 wherein said alarm signal generates an audible
2 alarm on said alarm device.

1 12. The system of claim 4 wherein said imaging device includes a fluoroscope
2 and an x-ray imaging sensor and wherein said computer is coupled to said fluoroscope
3 and wherein said fluoroscope is controlled by said computer.

1 13. The system of claim 12 wherein said fluoroscope is controlled by said
2 computer by altering an x-ray dosage applied by said fluoroscope.

1 14. The system of claim 12 wherein said fluoroscope is controlled by said
2 computer by changing a physical position of said fluoroscope.

1 15. The system of claim 1 wherein said imaging device is a magnetic
2 resonance imager.

1 16. The system of claim 4 wherein said computer defines said tissue margins
2 by utilizing an absolute measure of tissue.

1 17. The system of claim 4 wherein said computer defines said tissue margins
2 by utilizing a percentage of a physical dimension of the lesion.

1 18. A method for performing a medical procedure, comprising the steps of:
2 creating an image of a lesion within a patient's body on an imaging device;

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24. The method of claim 18 wherein said step of operating the resection device during the resection procedure within the patient's body based upon said defined tissue margins includes the step of generating an alarm signal if said resection device is

DECEMBER

4 positioned outside of said tissue margins.

1 25. The method of claim 24 wherein said step of generating an alarm signal
2 if said resection device is positioned outside of said tissue margins includes the step of
3 sounding an audible alarm.

1 26. The method of claim 24 further comprising the step of displaying said
2 tissue margins on a video display and wherein said step of generating an alarm signal if
3 said resection device is positioned outside of said tissue margins includes the step of
4 displaying a visual alarm on said visual display.

1 27. The method of claim 19 further comprising the step of controlling said
2 fluoroscope based on said processed data representative of the lesion image.

1 28. The method of claim 27 wherein said step of controlling said fluoroscope
2 includes the step of altering an x-ray dosage applied by said fluoroscope to improve an
3 image quality of the lesion image.

1 29. The method of claim 27 wherein said step of controlling said fluoroscope
2 includes the step of changing a physical position of said fluoroscope to improve an image
3 quality of the lesion image.

1 30. The method of claim 18 wherein said step of creating an image of a lesion
2 within the patient's body on an imaging device is performed by a magnetic resonance
3 imager.

1 31. The method of claim 18 wherein said step of defining tissue margins
2 around the lesion includes the step of utilizing an absolute measure of tissue.

1 32. The method of claim 18 wherein said step of defining tissue margins
2 around the lesion includes the step of utilizing a percentage of a physical dimension of
3 the lesion.

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